

NOTE

Annoyance by the Predaceous Bug, *Reduvius personatus* (L.)
(Hemiptera: Reduviidae), in North Central Colorado

Ryckman (1979. Vector Views 26(1, 2): 1-23) and Ryckman and Bently (1979). Vector Views 26(3, 4): 25-49) present comprehensive reviews of the literature concerning the extensive list of true bugs (orders Hemiptera and Homoptera) that attack man. They annotate published reports of bug bites, pointing out that the most serious reactions in humans usually result from hypersensitivity to the bites of hemophagous bugs such as the *Triatoma*. On the other hand, predaceous bug bites usually produce immediate painful reactions when proteolytic enzymes used to stun their arthropod prey are introduced into human tissues. Ulceration and necrosis may develop at the site of the bites. Pain from the bites of several predaceous bugs is frequently attributed to wasp stings.

Reduvius personatus (L.) is the species responsible for a great many of the reported bug bites. This widely distributed predator (North America, Europe, Africa) is called the masked hunter because the nymphs clothe themselves with debris. *Reduvius personatus* nymphs are commonly associated with cliff swallow, *Petrochelidon pyrrhonata*, nests in Colorado, feeding on the plethora of ectoparasites therein (Smith and Eads, 1978. J. Wash. Acad. Sci. 68(1): 23-26). The most abundant swallow ectoparasite in the Rocky Mountain area is the cimicid, *Oeciacus vicarius* Horvath. *Reduvius personatus* shows a marked predilection for feeding on bedbugs (Usinger, 1966. Thomas Say Found. Vol. VII, 585 pp.). Adult *personatus* in captivity will feed on most smaller insects offered them. However, in Colorado we have found nymphs only in swallow nests.

An interesting situation occurred in the vicinity of Fort Collins, Colorado, in the summer of 1981, when both an ectoparasite and its predator became public health problems. Mail (1940. J. Econ. Entomol. 33(6): 949) and Eads et al. (1980. Proc. Entomol. Soc. Wash. 82(1): 81-85) reported the swallow bug, *O. vicarius*, as an annoyance in a school and dwellings, respectively. As these bugs walk only short distances, known human attacks have been restricted to swallow nesting sites. However, adults of *R. personatus*, a predator on the cimicid, are strong fliers and are encountered well removed from swallow nests.

Normally, a few specimens of swallow bugs which have been annoying humans in dwellings in northern Colorado and Wyoming are submitted to us each summer for identification. A smaller number of the masked hunters are received each summer, usually only 1 or 2.

During the summer of 1981, there were no indications of unusually large *O. vicarius* population levels on the basis of complaints received. However, there was a marked increase in the number of *R. personatus* brought to us for specific determination. Most of the reported bites were provoked in that they involved handling of the bugs. A few resulted from bugs in flight alighting on individuals. A systematic survey was not made to evaluate population densities of *R. personatus* in and around dwellings, but specimens were received from throughout the city of Fort Collins and the surrounding area in Larimer County, Colorado, pri-

marily in June and July. One individual, displaying an ulcer on a finger resulting from a painful bite by one of these bugs, reported seeing a dozen or so of them in his yard and home, perhaps attracted by porch lights, within a few days' time in mid-June. There were no cliff swallow nesting colonies in the immediate vicinity of his home. We are unable to explain the high *personatus* population in 1981.

Eads et al. (1980) point out the desirability of reducing human annoyance from swallow bugs by swallow colony management around dwellings. Removing the nests and spraying the immediate area with an approved insecticide after the birds depart in the fall would prevent the buildup of excessive swallow bug populations. Cliff swallows build nests rapidly and are not discouraged or handicapped by being forced to rebuild nests in the spring. Control of the swallow bugs in urban areas would also possibly result in a reduction in the numbers of *R. personatus*. However, since the adults are strong fliers, some dispersal into urban areas from natural rural nesting sites such as cliff faces, bridges, and culverts would likely continue.

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PROC. ENTOMOL. SOC. WASH.
85(4), 1983, pp. 854-856

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Limnopus notabilis (Drake and Hottes) from central Arizona (Hemiptera: Heteroptera: Gerridae)

Limnopus notabilis (Drake and Hottes) has been reported from California, Colorado, Idaho, Iowa, Montana, Oregon, Utah, and Washington (Drake, C. J. and F. C. Hottes, 1925. *Ohio J. Sci.* 25: 46-50; Drake, C. J. and H. M. Harris, 1928. *Ohio J. Sci.* 28: 269-276) and Arizona, South Dakota, Wyoming, and British Columbia (Polhemus, J. T. and H. C. Chapman, 1979. *Bull. Calif. Insect Surv.* 21: 58-69).

Drake and Harris (1934. *Ann. Carnegie Mus.* 23: 179-240) described *L. notabilis* as a "common western species inhabiting the streams of the Pacific Coast and Rocky Mountain states" and "frequently occurring in large schools on the surface of mountain lakes." Polhemus and Chapman report that in northern and central California the species is found at "low to moderate elevations."

I recently discovered a well-preserved series of 19 specimens of *L. notabilis* in the Arizona State University museum collection. The specimens were collected at Woods Canyon Recreation Area, Cococino Co., Ariz. in a stream on 14 April 1971 by H. R. Rush. Six males and four females are fully macropterous; five males and four females have wings which cover the seventh abdominal tergite. Woods Canyon, although at a low temperate latitude (34°20'), is at an elevation of over 7000 feet (Brown, D. E. et al., 1981. *Drainage Map of Arizona*).

The series of specimens shows the marked sexual dimorphism which, although characteristic of the species and opposite of that found in most species of Gerridae (Calabrese, unpublished data)—i.e. here the males are larger than the females—